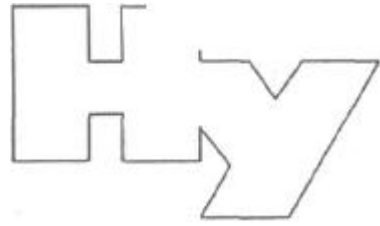


Gelsenkirchen



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50999 Köln

RE Product ZETOLAN-MEK
 here: Determination of the decomposability

Your ref.: Letters dated 18.03.1996, CL, and 01.04.1996, Dr.Gehrke

Dear Sir and Madam,

based upon the above orders, the product sample ZETOLAN-MEK handed out to us was examined for its decomposability within a period of 21 days. The result of the analyses can be seen from the table as well as the accompanying brief report.

The analytic work was performed following to OECD principles for „good laboratory practice“. The test substance ZETOLAN-MEK to be examined is a water-insoluble lubricant, which was examined according to the guidelines of the CEC method L-33-T-82* concerning the decomposition rate. The above named procedure is based on the fact that CH_3CH_2 molecular groups, which must be considered typical hydrocarbon components of oils and fats, can be extracted from an aqueous medium by means of organic solvents and detected by infrared spectroscopy.

* Co-Ordinating European Council for the development of Performance

To this purpose, aliquot amounts of test material are dissolved in trchlortrifluorethane, and defined parts of the solvent/substance mixture was mixed into an aqueous, mineral nutrient medium, which was inoculated with polyvalent organisms. The concentration of hydrocarbons was measured in three parallel preparations at the beginning of the test as well after 7 days and 21 days of decomposition. By analogy, the decomposability of a comparison substance (DITA = diisotridecyladipate) with known elimination rates was verified.

Examination results

Initial concentration Zetolan-MEK mgKW/l	Concentration after 7 days mgKW/l	Elimination %	Concentration after 21 days mgKW/l	Elimination in %
53,9	12,6	76,6	2,6	95,2
Initial concentration DITA mgKW/l	Concentration after 7 days mgKW/l	Elimination %	Concentration after 21 days mgKW/l	Elimination %
38,7	29,5	23,8	8,4	78,3

Based upon the detected elimination rates, the portions of aliphatic hydrocarbons contained in the product ZETOLAN-MEK can be classified as very well decomposable.

Yours sincerely
The director of the Institute
by order

i.A.

(Dipl.-Ing. Sauerwald)

